

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

No. 14

14 OCT 1929

Date of writing Report 21-8-1929

When handed in at Local Office 23-8-1929

Port of Nicolaieff U.S.S.R.

No. in Survey held at Nicolaieff U.S.S.R.

Date, First Survey 6-11-26

Last Survey 21-8-1929

Reg. Book.

Number of Visits

Tons Gross 4491  
Net 5335Single  
on the Twin  
Triple  
Quadruple  
Screw vessel

"EMBA NEFT"

Built at Nicolaieff By whom built Nicolaieff Jard "Andre Marti" Yard No. 185 When built 1929.  
Engines made at Augsburg By whom made Masch Augsburg Künzle A.G. Engine No. 26/10 When made 1927.  
Donkey Boilers made at Nicolaieff By whom made Nicolaieff Jard "Andre Marti" Boiler No. 1401 When made 1929.  
Brake Horse Power 2800 Owners Raphta Syndicate U.S.S.R. Port belonging to Novorossiisk.  
Nom. Horse Power as per Rule 944 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes.  
Trade for which vessel is intended Carrying Petroleum in Bulk.

IL ENGINES, &amp;c.—Type of Engines M.A.N. Diesel Engines 2 or 4 stroke cycle 2 Single or double acting Single.

Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 540 mm Length of stroke 900 mm No. of cylinders 12 (226) No. of cranks 12 (226)

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 802 mm Is there a bearing between each crank yes.

Revolutions per minute 110 Flywheel dia. 2100 mm Weight 6300 kgs. Means of ignition Diesel system Kind of fuel used

Crank Shaft, dia. of journals as per Rule 346 mm as fitted 360 mm Crank pin dia. 360 mm Crank Webs Mid. length breadth beam built shrunk Mid. length thickness 335 mm Thickness parallel to axis 365 mm Thickness around eyehole 154.5 mm

Flywheel Shaft, diameter as per Rule 360 mm as fitted Intermediate Shafts, diameter as per Rule 258 mm as fitted 280 mm Thrust Shaft, diameter at collars as per Rule 360 mm as fitted

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 314 mm as fitted 334 mm Is the tube screw shaft fitted with a continuous liner no

Bronze Liners, thickness in way of bushes as per Rule 17.48 mm as fitted 18 mm Thickness between bushes as per rule Is the after end of the liner made watertight in the

propeller boss yes If the liner is in more than one length are the functions made by fusion through the whole thickness of the liner

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft yes Length of Bearing in Stern Bush next to and supporting propeller 1336 mm

Propeller, dia. 4000 mm Pitch 3420 mm No. of blades 4 Material Steel whether Moveable no Total Developed Surface 58 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Need Thickness of cylinder liners 47 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. 2 Fresh Water 3 Salt Water Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Large Pumps worked from the Main Engines, No. 2 Diameter 135 mm Stroke 200 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line No. and Size 2 135 mm x 130 mm How driven Electrically

Ballast Pumps, No. and size 2 190 mm x 180 mm Lubricating Oil Pumps, including Spare Pump, No. and size 2 geared cog-wheel pumps

Two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 3 x 100 mm

Holds, &amp;c. 3 x 46 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 x 150 mm

All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

All Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate

At pipes pass through the bunkers none How are they protected

At pipes pass through the deep tanks none Have they been tested as per Rule

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

The arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

partment to another yes Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. 2 No. of stages 3 Diameters 580/515/120 Stroke 500 mm Driven by Main Engine

Auxiliary Air Compressors, No. 1 No. of stages 3 Diameters 306.5/265/67.5 Stroke 200 mm Driven by Aux Engine

Emergency Air Compressors, No. 1 No. of stages 2 Diameters 18 Cubic inch Capacity Driven by Emergency Eng.

Engaging Air Pumps, No. 4 Diameter 320 mm Stroke 900 mm Driven by Crossheads.

Auxiliary Engines crank shafts, diameter as per Rule 132 mm as fitted 135 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes

Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Flanges top &amp; bottom

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 2 Cubic capacity of each 200 litres Internal diameter 405 mm thickness 14.5 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 41-50 kg/cm<sup>2</sup> Working pressure by Rules 90.6 kg/cm<sup>2</sup>

Starting Air Receivers, No. 6 Total cubic capacity 7200 litres Internal diameter 585 mm thickness 27.5 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 41-50 kg/cm<sup>2</sup> Working pressure by Rules 102.2 kg/cm<sup>2</sup>



IS A DONKEY BOILER FITTED?

Yes. 2.

If so, is a report now forwarded?

Yes.

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

10.6.27.

Receivers

Separate Tanks

Donkey Boilers

Yes

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

As per attached list.

The foregoing is a correct description,

*Slump*

Manufacturer.

19/11/25.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

Constant attendance in yard

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

Propellers

Stern tube

Engine seatings

Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shafts Material

Identification Mark

Is the flash point of the oil to be used over 150° F.

Yes

Is this machinery duplicate of a previous case

No.

If so, state name of vessel

General Remarks

(State quality of workmanship, opinions as to class, &c.

These main engines which were

built in Augsburg Germany have now been fitted on board the vessel in a satisfactory manner and tried under full power at sea with satisfactory results.

The Auxiliary Machinery consisting of 3 Diesel engines - 2 of 120 B.H.P and 1 of 60 B.H.P. has been built by the Andrei Marki yard, Nicolaieff, under special survey. The materials are sound and the workmanship good. The engines were tested on the test-bench for 48 hours and again under working conditions after being fitted on board the vessel with satisfactory results.

The whole machinery in my opinion is eligible to be classed in the Register Book with Record + L.M.C. 9-29.

Copy of Bremen (Augsburg) Report. N° 1008 attached.

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Committee's Minute

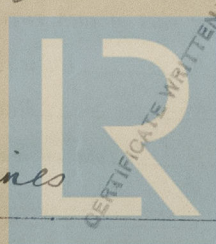
Assigned

FRI. 25 OCT 1929

+ L.M.C. 9:29 Oil Engines  
2 KB 85 lb.

J. J. Barr.

Engineer Surveyor to Lloyd's Register of Shipping.



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